ABSTRACT OF THE DISCLOSURE

One embodiment of the disclosures made herein is an apparatus adapted to facilitate error detection for Content Addressable Memory (CAM) modules. In accordance with such an apparatus, the apparatus includes an input error detection module and an output error detection module. The input error detection module includes a parity word generator that generates a key-based parity word after receiving a key. The key-based parity word and the key jointly define a comparand that is provided to the CAM module. The input error detection module provides the comparand to the CAM module. The output error detection module includes a protection word generator that generates a key-based protection word after receiving the key. The output error detection module includes memory adapted for accessing a predetermined protection word corresponding to an address of a CAM module that corresponds to the comparand from the memory in response to receiving the address from the CAM module. The address is accessed by searching storage of the CAM module. The output error detection module includes a comparator connected to the protection word generator and to the memory. The comparator enables the predetermined protection word to be compared with the key-based protection word for facilitating issuance of an output error indication when the predetermined protection word is different than the key-based protection word. The apparatus further includes means for receiving an input error indication provided by the CAM module in response to failing to find the address corresponding to comparand in the storage of the CAM module.